

POLICY ISSUE BRIEF

A Gender-Sensitive Technology Impact Assessment System

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Introduction

The Science and Technology Agenda for National Development (STAND) Philippines 2000 is the government's response to the challenge of building a competitive edge for the country.

To carry out its objectives, STAND Philippines 2000 adopts strategies such as increasing private sector participation in the identification, selection and utilization of technologies to improve productivity; networking among institutions, both private and government; increasing and upgrading the country's S&T capabilities, etc.

Key to these strategies is the utilization of emerging technologies to cope with the modern market forces, including technologies in microelectronics, laser, biotechnology, materials science and information technology.

Even as the country embarks on this strategy of technology intensification, we should not lose track of the social implications which STAND 2000 will have on various sectors. The women's sector, in particular, could be threatened by technological unemployment by increasing mechanization of work. This policy paper is an effort to make the technology transfer and delivery system and commercialization activities gender-sensitive.

The Policy Setting

The Beijing Platform for Action of the Fourth World Conference on Women in 1995 explicitly stipulates several measures addressing the issue of women, technology and the environment. It mandates governments to put in place policies and institutional practices which would enable the development of gender-sensitive and environmentally appropriate technologies.

The Department of Science and Technology (DOST) is the key line agency to oversee the implementation of STAND Philippines 2000. It is guided by a 10-year plan (1990-2000) which spells out the blueprint for activities to contribute to the development goals of the Medium Term Philippine Development Plan.

What are the goals of the Medium Term Development Plan?

1. Alleviation of poverty
2. Generation of more productive employment
3. Promotion of equity and social justice
4. Attainment of sustainable economic growth
5. Protection and enhancement of environmental quality

What are some of the DOST policy directions to achieve these goals?

1. To aggressively acquire and adapt technology from domestic and foreign sources, including utilization of local and foreign experts by providing incentives and other privileges
2. To upgrade and expand S&T services and facilities to ensure that local products meet required standards to be competitive in the world market
3. To increase the quality and quantity of scientists and engineers and encourage the private sector to play a bigger role in developing the nation's human resource base through more scholarships and trainings
4. To expand and strengthen scientific and technical cooperation with other countries through technical assistance programs on technology transfer, joint research undertakings and exchange of experts in identified priority areas
5. To improve the work environment and incentives for S&T personnel including appropriate rewards for significant contributions to national socio-economic growth.



One of the main thrust of DOST is to actively engage the network of agencies, both public and private, in the promotion and commercialization of technologies such as sectoral planning councils, R&D institutes, service institutes and S&T advisory bodies.

What are the five sectoral planning councils of DOST and their functions?

1. The Philippine Council for Industry and Energy Research and Development (PCIERD) - the central agency in the planning, monitoring and promotion of scientific and technological research for applications in industry, energy, utilities and infrastructure sectors
2. The Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) - the sectoral planning council for agriculture, forestry and natural resources
3. The Philippine Council for Health Research and Development (PCHRD) - coordinating and monitoring research activities in the health sector
4. The Philippine Council for Aquatic and Marine Research and Development (PCAMRD) - for fisheries and aquatic resources research and development
5. The Philippine Council for Advanced Science and Technology Research and Development (PCASTRD) - national research system for advanced science and technology and related fields

Aside from the formulation of policies, plans, programs, projects

and strategies for S&T development for their sector, they also generate, program and allocate funds, and monitor R & D projects.

What is the implementing arm of DOST in the commercialization of technologies?

The Technology Application and Promotion Institute (TAPI) is tasked to promote the transfer and commercialization of technologies and in marketing the services of the other units and agencies of DOST.

How does a technology become commercial?

The process by which a technology resulting from individual researches are evaluated for possible commercialization varies among institutions. Most line R&D agencies have their own in-house reviews, wherein technical panels evaluate and identify those with commercial potential. TAPI, through various technology promotion units of the various sectoral councils, sponsors research symposia and technology

forums, in which research results conducted by line R&D agencies and units, are presented to the public. This is where potential investors are identified. Feasibility studies, piloting and technical evaluation are conducted to further ascertain not only the technical but also the financial viability of the technology.

Are there technologies that could have displacing effects on women?

* The 45-day chick technology may dislocate the mainly women-managed backyard poultrys according to studies conducted by Illo (1994).

* Agricultural machineries are developed with a male user as the prototype, effectively causing the displacement of female labor.

* Pesticide and other chemical residues may also affect women more than men, even if pesticide and fertilizer application may be a male job, but it is mostly the women who are exposed longer when weeding

Gender Gaps and Opportunities

1. In the Philippine Plan for Gender and Development, the chapter on Science and Technology has identified the absence of institutional mechanisms to measure the impact of S&T on women. There is no uniform mandate to undertake technology impact assessment (TIA) at all.

2. There is no uniform protocol for technology evaluation and certification. And there are no well-defined rules and parameters under which such standards can be imposed. These functions are vested in other agencies, each possessing different protocol and standards. Food and drugs will have to pass thru the Bureau of Food and Drugs (BFAD) of the Department of Trade and Industry. New crop varieties will have to be certified by the National Seed Board (NSB) while fertilizers and pesticides, through the Fertilizers and Pesticide Authority (FPA), both agencies of the Department of Agriculture. Agricultural machineries are tested and evaluated by the Agricultural Machinery Testing and Evaluation Center (AMTEC) of the University of the Philippines at Los Banos (UPLB). Other technologies such as machineries and chemicals which will be part of processing plants will be indirectly evaluated through an Environmental Impact Assessment.

3. The language of STAND Philippines 2000 is the language of productivity and competitiveness. Nowhere does it mention that the technologies should be gender-sensitive. It is also silent on the

issue of gender equality and women's empowerment in its agenda to promote social equity and justice.

Policy Recommendations

The establishment of a gender-sensitive technology transfer and delivery systems and commercialization activities in the Philippines involves the promulgation of a policy instrument that would create and rationalize a TIA system, and conduct policy support activities to put such a system in place.

The various sectoral councils and TAPI are key players in this. These are the units through which research and development outputs, in the form of technologies are monitored, evaluated, and cleared for potential commercialization.

A. For creating a gender-sensitive technology impact assessment system:

1. DOST, through TAPI and its sectoral councils and in consultation with relevant agencies, must develop a standard procedure for assessing the bio-physical and socio-economic impacts of technologies prior to commercialization in the form of mandatory requirements. A TIA is a pre-requisite before it can be subject for review by other bodies such as BFAD, NSB, AMTEC AND FPA.

2. The socio-economic aspect of the TIA must contain provisions for public consultations, social acceptability and gender-sensitivity. DENR's EIA proceedings may be used as a model. A framework for assessing social impacts, including impacts on women's health and overall well-being, as well as indigenous women's knowledge will have to be developed.

3. The development of the TIA system should involve the participation of all concerned sectors such as the academe, the private sector, other govt. agencies and sectors in civil society, including the women sector.

B. For support mechanisms:

1. DOST, in coordination with NCRFW, should conduct intensive gender-sensitivity training for the technology promotion and assessment units of the various DOST sectoral councils (PCIERD, PCARRD, PCASTRD, PCHRD and PCAMRD) and TAPI. Similar training will have to be conducted for the technology certification bodies (BFAD, NSB, FPA and AMTEC).

2. Researches on the gender impacts of existing and proposed technologies in all sectors must be supported to enable the establishment of a gender-sensitive data-base and information system.

3. Trainings must also be conducted on gender-sensitive TIA for potential impact evaluators. A mechanism for TIA preparers, similar to the EIA system, can be devised. And gender-sensitivity should be a major requirement.



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